

AMENDMENTS TO THE CLAIMS

Please amend the claims as set forth below:

1. - 25. Canceled

26. (Currently amended) A communication device comprising:

a baseband symbol generator;

a dipole antenna;

a power amplifier coupled to said dipole antenna, the power amplifier being configured to receive a first output of said baseband symbol generator from a signal path that includes a fractional-N sigma-delta modulator having a pre-emphasis filter to receive a second output of the baseband symbol generator, and to amplify the first output with a gain that is controlled by a varying amplitude of the second output. ; and

a fractional-N sigma-delta modulator coupled to said power amplifier, said fractional N sigma-delta modulator including at least:

— a pre emphasis filter coupled to an input of a sigma delta converter; and
— a fractional-N phase locked loop unit coupled to an output of said sigma-delta converter,

wherein a transfer function of said filter is to be optimized according to predefined optimization criteria;

wherein said optimization criteria are related to an input to said pre-emphasis filter and are related to an input to a voltage controlled oscillator of the fractional N phase locked loop unit.

27. - 32. Canceled

33. (New) The communication device of claim 26, wherein a transfer function of the pre-emphasis filter is optimized according to pre-defined optimization criteria.

34. (New) The communication device of claim 33, wherein said transfer function of said pre-emphasis filter is a finite impulse response.

35. (New) The communication device of claim 33, wherein said optimization criteria includes a mean squared error of an input to said filter and an input to a voltage controlled oscillator of a fractional-N phase locked loop unit.

36. (New) The communication device of claim 26, wherein said fractional-N sigma-delta modulator includes at least:

a sigma-delta converter coupled to the pre-emphasis filter; and
a fractional-N phase locked loop unit coupled to an output of said sigma-delta converter,

wherein a transfer function of said pre-emphasis filter is to be optimized according to predefined optimization criteria; and

wherein said optimization criteria are related to an input to said pre-emphasis filter and are related to an input to a voltage controlled oscillator of the fractional-N phase locked loop unit.

37. (New) The communication device of claim 36, wherein said transfer function is a finite impulse response.

38. (New) The communication device of claim 36, wherein said transfer function is an infinite impulse response.